

WHAT IS CLAIMED:

1. A reversible ratchet wrench comprising:
 - a. a handle having a head at one end thereof that defines a driving chamber therein;
 - b. a receiving chamber located adjacent to said driving chamber;
 - c. a retaining recess intermediate and in communication with said driving chamber and said receiving chamber, said retaining recess defining a first wall and a second wall;
 - d. a driving member received in said driving chamber, said driving member defining a plurality of teeth thereon;
 - e. a retaining member defining a plurality of teeth and being slidably received in said retaining recess, said retaining member having an arcuate pressing recess formed intermediate a first and a second end of said retaining;
 - f. a direction control member mounted in said receiving chamber and moveable between a first predetermined position and a second predetermined position; and
 - g. a pressing member having a longitudinal axis therethrough and mounted between said direction control member and said retaining member pressing recess,wherein when said direction control member is in said first predetermined position, said retaining member first end and said pressing member abut said retaining recess first wall so that said pressing member longitudinal axis is parallel to a force vector between said retaining member first end and said retaining recess first wall, and wherein when said direction control member is in said second predetermined position, said retaining member second end and said pressing member abut said retaining recess second wall so that said pressing member longitudinal axis is parallel said force vector between said retaining member second end and said retaining recess second wall.
2. The reversible ratchet wrench of claim 1, further comprising an elastic member intermediate said direction control member and said pressing member.
3. The reversible ratchet wrench of claim 1, wherein edges of said drive member teeth extend between opposite axial ends of said drive member in uniform curves extending

inward from the opposite axial ends so that an outer surface of said drive member defined by said drive member teeth is concave at a center area, wherein edges of said retaining member teeth extend between opposite sides of a face of said retaining member in uniform curves extending away from the opposite sides so that said retaining member face is convex at a center area, and wherein said retaining member teeth engage said drive member teeth at said center area of said retaining member and said center area of said drive member.

4. The reversible ratchet wrench of claim 1, wherein said retaining member teeth are split into a first plurality and second plurality of retaining member teeth and a support portion is formed intermediate said first and said second plurality of retaining member teeth, said retaining member being pivotable about said support portion to selectively engage said retaining member first plurality of teeth or said retaining member second plurality teeth with said driving member teeth.

5. A reversible ratchet wrench comprising:

- a. a handle;
- b. a retaining recess formed in said handle and defining a first wall and a second wall;
- c. a driving member received in said handle, said driving member defining a plurality of teeth thereon;
- d. a retaining member defining a plurality of teeth slidably received in said retaining recess, said retaining member having a first and a second end of said retaining member;
- e. a direction control member rotatably received in said handle and moveable between a first predetermined position and a second predetermined position; and
- f. a pressing member having a longitudinal axis therethrough and mounted between said direction control member and said retaining member,

wherein when said direction control member is in said first predetermined position, said retaining member first end and said pressing member abut said retaining recess first wall so that said pressing member longitudinal axis is parallel a force vector between said retaining member first end and said retaining recess first wall, and

wherein when said direction control member is in said second predetermined position, said retaining member second end and said pressing member abut said retaining recess second wall so that said pressing member longitudinal axis is parallel to said force vectors between said retaining member second end and said retaining recess second wall.

6. The reversible ratchet wrench of claim 5, further comprising an elastic member intermediate said direction control member and said pressing member.

7. The reversible ratchet wrench of claim 5, wherein edges of said drive member teeth extend between opposite axial ends of said drive member in uniform curves extending inward from the opposite axial ends so that an outer surface of said drive member defined by said drive member teeth is concave at a center area, wherein edges of said retaining member teeth extend between opposite sides of a face of said retaining member in uniform curves extending away from the opposite sides so that said retaining member face is convex at a center area, and wherein said retaining member teeth engage said drive member teeth at said center area of said retaining member and said center area of said drive member.

8. The reversible ratchet wrench of claim 5, wherein said retaining member teeth are split into a first plurality and second plurality of retaining member teeth and a support portion is formed intermediate said first and said second plurality of retaining member teeth, said retaining member being pivotable about said support portion to selectively engage said retaining member first plurality of teeth or said retaining member second plurality teeth with said driving member teeth.

9. A reversible ratchet wrench comprising:

- a. a handle having a head at one end thereof that defines a driving chamber therein;
- b. a receiving chamber located adjacent to said driving chamber;
- c. a retaining recess intermediate and in communication with said driving chamber and said receiving chamber, wherein said retaining recess defines a first wall and a second wall, and wherein each of said first wall and said second wall defines a respective edge surface;

- 9 d. a driving member received in said driving chamber, said driving member
10 defining a plurality of teeth about a circumference thereof;
- 11 e. a retaining member slidably received in said retaining recess and defining a
12 plurality of teeth that face said driving member teeth, said retaining member
13 having an arcuate pressing recess facing away from said driving member and
14 disposed intermediate a first and a second end of said retaining member;
- 15 f. a direction control member having a knob and having a body mounted in said
16 receiving chamber, wherein said body is rotatable within said receiving chamber
17 by said knob between a first predetermined position and a second predetermined
18 position;
- 19 g. a pressing member having a longitudinal axis and received by said direction
20 control member so that said pressing member rotates with said direction control
21 member between said first predetermined position and said second
22 predetermined position; and
- 23 h. a spring that biases said pressing member against said pressing recess of said
24 retaining member,
- 25 wherein said pressing member abuts said edge surface of said first wall when
26 said direction control member is in said first predetermined position, and abuts said
27 edge surface of said second wall when said direction control member is in said second
28 predetermined position, so that said respective edge surfaces restrain rotation of said
29 direction control member beyond an arc bounded by said first predetermined position
30 and said second predetermined position.

1 10. The reversible ratcheting wrench of claim 9, wherein

2 when said direction control member is in said first predetermined position, said
3 first end of said retaining member abuts said first wall of said retaining recess and said
4 pressing member longitudinal axis is parallel to a force vector acting on said retaining
5 member, and

6 when said direction control member is in said second predetermined position,
7 said second end of said retaining member abuts said second wall of said retaining recess

8 and said pressing member longitudinal axis is parallel to a force vector acting on said
9 retaining member.